

Listing of Claims:

Claims 1-8 (Canceled).

9. (Previously Presented) A radar oscillator comprising:

an oscillating unit having amplifier means and at least one
of a feedback circuit which applies a positive feedback from an
output side to an input side of the amplifier means and a
resonator which resonates at the predetermined frequency, the at
least one of the feedback circuit and the resonator cooperating
with the amplifier means to enable oscillation at a predetermined
frequency, the resonator being connected to an input section or
output section of the amplifier means, and the oscillating unit
outputting and stopping an oscillation signal having the
predetermined frequency from the output side of the amplifier
means in an oscillating state and an oscillation stop state,
respectively; and

switching means connected to the oscillating unit, the
switching means including an electronic switch which receives a
pulse signal indicating a transmission timing of a radar wave and
changes an operating state of the oscillating unit to the
oscillating state and the oscillation stop state at first and
second levels of the pulse signal in order to intermit an output

of the oscillation signal in response to a level of the pulse signal;

wherein the oscillating unit selectively has a high frequency earth line, a power supply line for the amplifier means
25 in the oscillating unit, and an element to set the oscillating unit outside of a normal operation range, and

wherein the switching means includes a plurality of switches obtained by selectively combining:

a first switch which opens or closes between at least
30 one of the input section and the output section of the amplifier means in the oscillating unit and the high frequency earth line based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop
35 state;

a second switch which connects or disconnects the element to set the oscillating unit outside of the normal operation range to and from the oscillating unit based on the pulse signal indicating the transmission timing of the radar
40 wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state; and

a third switch which opens or closes the power supply line for the amplifier means in the oscillating unit based on the pulse signal indicating the transmission timing of the radar

45 wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state.

Claim 10 (Canceled).

11. (Currently Amended) A radar oscillator ~~according to claim 1,~~ comprising:

5 an oscillating unit having amplifier means, a feedback circuit which applies a positive feedback from an output side to an input side of the amplifier means and a resonator which resonates at the predetermined frequency, the feedback circuit and the resonator cooperating with the amplifier means to enable oscillation at a predetermined frequency, the resonator being connected to an input section or output section of the amplifier means, and the oscillating unit outputting and stopping an
10 oscillation signal having the predetermined frequency from the output side of the amplifier means in an oscillating state and an oscillation stop state, respectively; and

15 switching means connected to the oscillating unit, the switching means including an electronic switch which receives a pulse signal indicating a transmission timing of a radar wave and changes an operating state of the oscillating unit to the oscillating state at a first level of the pulse signal and the oscillation stop state at a second level of the pulse signal in

20 order to intermit an output of the oscillation signal in response to a level of the pulse signal;

wherein the amplifier means includes an amplifier provided in an output stage of the oscillating unit;

wherein the oscillating unit has a power supply line for the amplifier means in the oscillating unit;

25 wherein the switching means includes a first switch which opens or closes the power supply line for the amplifier means in the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the
30 operating state of the oscillating unit to the oscillating state or the oscillation stop state;

 wherein the oscillating unit has an element to set a resonance frequency of the oscillator in the oscillating unit to a frequency which prevents a positive feedback from the output
35 side to the input side of the amplifier means, thereby setting the resonance frequency outside of a normal operation range in the oscillating unit, and

wherein the switching means includes a third switch which connects or disconnects the element to set the resonance
40 frequency of the resonator in the oscillating unit outside of the normal operation range to and from the oscillating unit based on the pulse signal indicating the transmission timing of the radar

wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state.

12. (Currently Amended) A radar oscillator ~~according to claim 2,~~ comprising:

an oscillating unit having amplifier means, a feedback circuit which applies a positive feedback from an output side to an input side of the amplifier means and a resonator which resonates at the predetermined frequency, the feedback circuit and the resonator cooperating with the amplifier means to enable oscillation at a predetermined frequency, the resonator being connected to an input section or output section of the amplifier means, and the oscillating unit outputting and stopping an oscillation signal having the predetermined frequency from the output side of the amplifier means in an oscillating state and an oscillation stop state, respectively; and

switching means connected to the oscillating unit, the switching means including an electronic switch which receives a pulse signal indicating a transmission timing of a radar wave and changes an operating state of the oscillating unit to the oscillating state at a first level of the pulse signal and the oscillation stop state at a second level of the pulse signal in order to intermit an output of the oscillation signal in response to a level of the pulse signal;

wherein the amplifier means includes an amplifier provided in an output stage of the oscillating unit;

25 wherein the oscillating unit has a power supply line for the amplifier means in the oscillating unit;

wherein the switching means includes a first switch which opens or closes the power supply line for the amplifier means in the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state;

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wherein the oscillating unit has a high frequency earth line, and the switching means includes a second switch which opens or closes between at least one of the input section and the output section of the amplifier means in the oscillating unit and the high frequency earth line of the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state;

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40 wherein the oscillating unit has an element to set a resonance frequency of the oscillator in the oscillating unit to a frequency which prevents a positive feedback from the output side to the input side of the amplifier means, thereby setting the resonance frequency outside of a normal operation range in

45 the oscillating unit; and

wherein the switching means includes a third switch which connects or disconnects the element to set the resonance frequency of the resonator in the oscillating unit outside of the normal operation range to and from the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state.

13. (Previously Presented) A radar oscillator comprising:
an oscillating unit having amplifier means, a feedback circuit which applies a positive feedback from an output side to an input side of the amplifier means and a resonator which resonates at the predetermined frequency, the feedback circuit and the resonator cooperating with the amplifier means to enable oscillation at a predetermined frequency, the resonator being connected to an input section or output section of the amplifier means, and the oscillating unit outputting and stopping an oscillation signal having the predetermined frequency from the output side of the amplifier means in an oscillating state and an oscillation stop state, respectively; and

switching means connected to the oscillating unit, the switching means including an electronic switch which, receives a pulse signal indicating a transmission timing of a radar wave, and changes an operating state of the oscillating unit to the

oscillating state and the oscillation stop state at first and second levels of the pulse signal in order to intermit an output of the oscillation signal in response to a level of the pulse
20 signal;

wherein the resonator is connected to the input section or output section of the amplifier means, and the oscillating unit outputs and stops the oscillation signal having the predetermined frequency determined by the resonator from the output side of the
25 amplifier means in the oscillating state and the oscillation stop state, respectively;

wherein the oscillating unit selectively has a high frequency earth line, a power supply line for the amplifier means in the oscillating unit, and an element to set a resonance
30 frequency of the resonator in the oscillating unit outside of a normal operation range in the oscillating unit, and

wherein the switching means includes a plurality of switches obtained by selectively combining:

a first switch which opens or closes between at least
35 one of the input section and the output section of the amplifier means in the oscillating unit and the high frequency earth line based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop
40 state;

a second switch which connects or disconnects the element to set the resonance frequency of the resonator in the oscillating unit outside of the normal operation range to and from the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state; and

a third switch which opens or closes the power supply line for the amplifier means in the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state.

Claims 14-25 (Canceled).